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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/548,892	04/13/2000	Thomas I. Insley	52942USA6A	7476

7590

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EXAMINER

MARKHAM, WESLEY D

ART UNIT

PAPER NUMBER

1762

DATE MAILED: 10/16/2002

17

Please find below and/or attached an Office communication concerning this application or proceeding.

TC-17

# Office Action Summary

Application No.

09/548,892

Applicant(s)

INSLEY ET AL.

Examiner

Wesley D Markham

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 23 and 24 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26-30 is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 9-17, 22, 25, 32 and 33 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 8, 18-21 and 31 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. Acknowledgment is made of applicant's amendment C, filed as paper #16 on 8/5/2002, in which independent Claim 1 was amended and Claims 25 – 33 were added. Claims 1 – 33 are currently pending in the instant application, and Claims 23 – 24 stand withdrawn from further consideration by the examiner as being drawn to a non-elected invention. An Office Action on the merits follows.

### ***Claim Objections***

2. Claim 31 is objected to because of the following informalities: The word "volume" in line 2 of the claim appears to be misspelled "volumen". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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5. Specifically, Claim 25 recites the limitation "the liquid of a controlled environment" in line 2 of the claim. As no liquid has previously been mentioned in Claim 25, there is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that formed the basis for the rejections under this section made in the previous Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. The rejection of (1) Claims 1 and 3 under 35 U.S.C. 102(b) as being anticipated by the IBM Technical Disclosure Bulletin, December 1961, set forth in paragraph 4 of the previous Office Action, (2) Claims 1, 3, 4, 7, 10, and 11 under 35 U.S.C. 102(b) as being anticipated by Sidles et al. (USPN 4,351,789), set forth in paragraph 5 of the previous Office Action, and (3) Claims 1 – 4, 7, 12, and 22 under 35 U.S.C. 102(b) as being anticipated by Popov et al. (Russian Document Number 423483), set forth in paragraphs 7 – 8 of the previous Office Action, is withdrawn in light of applicant's amendment C. Specifically, amended independent Claim 1 now requires that the dielectric article have a resistivity of greater than  $10^{14}$  ohms-cm. None of the aforementioned references alone explicitly teach this limitation, and therefore the 35 U.S.C. 102(b) rejections are withdrawn.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. The rejection of Claims 10, 11, and 13 under 35 U.S.C. 103(a) as being unpatentable over Popov et al. (Russian Document Number 423483) in view of Coufal et al. (USPN 5,280,406), set forth in paragraph 13 of the previous Office Action, is withdrawn in light of applicant's amendment C. Specifically, amended independent Claim 1 (from which Claims 10, 11, and 13 depend) now requires that the dielectric article have a resistivity of greater than  $10^{14}$  ohms-cm. The combination of Popov et al. and Coufal et al. alone does not teach this limitation.

11. Claims 1, 3, 4, 7, 10, 11, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sidles et al. (USPN 4,351,789) in view of Agostini et al. (USPN 6,172,137 B1).
12. Sidles et al. teach all the limitations of Claims 1, 3, 4, 7, 10, and 11 as set forth in paragraph 5 of the previous Office Action, except for a method wherein the dielectric article (i.e., the rubber tire of Sidles et al.) has a resistivity of greater than  $10^{14}$  ohms-cm. However, Sidles et al. do teach using rubber compositions in general for the tire blank without explicitly teaching the resistivity of the rubber (Col.6, lines 51 – 56). Agostini et al. teach that it was known in the art at the time of the applicant's invention to adjust the electrical conductivity / volume resistivity of a rubber tire composition to a desired value, even to above  $10^{12}$  ohm-cm (i.e., a range the encompasses the applicant's claimed range) (Abstract and Col.2, lines 50 – 67). Further, Agostini et al. teach that a higher electrical resistivity is used when greater friction (i.e., traction) is desired for the rubber composition (Col.3, lines 1 – 5). In other words, Agostini et al. teach that electrical resistivity is a result / effective variable that determines the traction of a tire. It would have been obvious to one of ordinary skill in the art to use a rubber composition having a resistivity of greater than  $10^{14}$  ohms-cm as claimed by the applicant as the rubber composition in the tire molding process of Sidles et al. (USPN 4,351,789) with the reasonable expectation of (1) success, as Agostini et al. teach that it was known in the art at the time of the applicant's invention to adjust the electrical conductivity / volume resistivity of a

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rubber tire composition to above  $10^{12}$  ohm-cm, and (2) obtaining the benefits of using a rubber having a high resistivity such as increasing the traction of the tire. The exact resistivity value would have been optimized by one of ordinary skill in the art through routine experimentation as a result / effective variable that determines the traction of a tire. Regarding new independent Claim 33, the claim mirrors independent Claim 1 (which is rejected under 35 U.S.C. 103(a) as set forth in paragraph 5 of the previous Office Action and above) but requires altering at least one property of the controlled environment so as to cause the vapor of the atmosphere to condense. The combination of Sidles et al. and Agostini et al. teaches this limitation. Specifically, Sidles et al. teach introducing water vapor (i.e., steam) into the mold cavity (i.e., the "controlled environment") and condensing the water vapor to form a film of the liquid coating material on the surface of the tire blank (Col.4, lines 64 – 68, and Col.5, lines 1 – 10). In other words, the amount of water vapor (i.e., a property) in the controlled environment is altered (i.e., increased), thereby causing the vapor to condense on the tire blank.

13. Claims 1 – 4, 7, 12, 14 – 17, 22, 32, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Popov et al. (Russian Document Number 423483) in view of Angadjivand et al. (USPN 5,496,507).
14. Popov et al. teach all the limitations of Claims 1 – 4, 7, 12, and 22 as set forth in paragraphs 7 and 8 of the previous Office Action, except for a method wherein dielectric article (i.e., the polypropylene or polyamide filament filter cloth) has a

resistivity of greater than  $10^{14}$  ohms-cm. However, it would have been obvious to one of ordinary skill in the art to utilize the specific polypropylene non-woven, melt-blown, microfiber webs taught by Angadjivand et al. (and claimed by the applicant in Claims 14 – 17) as the polypropylene filament cloth in the process of Popov et al. for the reasons set forth in paragraph 15 of the previous Office Action. The webs / cloths taught by Angadjivand et al. have a resistivity of greater than  $10^{14}$  ohms-cm (Col.2, lines 48 – 62), as required by the applicant's amended claims. Regarding new independent Claim 32, this claim mirrors previous Claim 22 (i.e., it requires that the dielectric article be a non-conductive polymeric material, the condensate comprises a polar liquid, and the electric exhibits a persistent electric charge) and is therefore rejected over the combination of Popov et al. and Angadjivand et al. for the reasons set forth above and in paragraph 8 of the previous Office Action. Regarding new independent Claim 33, the claim mirrors independent Claim 1 (which is rejected under 35 U.S.C. 103(a) as set forth in paragraph 7 of the previous Office Action and above) but requires altering at least one property of the controlled environment so as to cause the vapor of the atmosphere to condense. The combination of Popov et al. and Angadjivand et al. teaches this limitation. Specifically, Popov et al. teach condensing vapors of isopropyl alcohol, ethanol, etc. onto a layer of polypropylene filaments / cloth by passing the vapors through the layer (page 2). In other words, the amount of alcohol vapor (i.e., a property) present in the "controlled environment" (i.e., the environment in which the cloth is treated) is increased (i.e., altered), thereby causing the vapor to condense on the cloth or web.



15. Claims 10, 11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Popov et al. (Russian Document Number 423483) in view of Angadjivand et al. (USPN 5,496,507), and in further view of Coufal et al. (USPN 5,280,406).
16. The combination of Popov et al., Angadjivand et al., and Coufal et al. teaches all the limitations of Claims 10, 11, and 13 as set forth above in paragraph 14 and in paragraph 13 of the previous Office Action.
17. Claims 1 – 4, 7, 9 – 11, 14 – 17, 22, 32, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Angadjivand et al. (USPN 5,496,507) in view of Pike et al. (USPN 5,759,926).
18. The combination of Angadjivand et al. and Pike et al. teaches all the limitations of Claims 1 – 4, 7, 9 – 11, 14 – 17, and 22 as set forth in paragraph 11 of the previous Office Action and below. Please note that Angadjivand et al. teach that the webs / cloths used to make the electrets of their invention have a resistivity of greater than  $10^{14}$  ohms-cm (Col.2, lines 48 – 62), as required by the applicant's amended claims. Regarding new independent Claim 32, this claim mirrors previous Claim 22 (i.e., it requires that the dielectric article be a non-conductive polymeric material, the condensate comprises a polar liquid, and the electric exhibits a persistent electric charge) and is therefore rejected over the combination of Angadjivand et al. and Pike et al. for the reasons set forth in paragraph 11 of the previous Office Action, paragraph 11 of the final rejection (paper #6), and paragraphs 19 – 21 of the non-

final rejection (paper #4). Regarding new independent Claim 33, the claim mirrors independent Claim 1 (which is rejected under 35 U.S.C. 103(a) as set forth in paragraph 11 of the previous Office Action and above) but requires altering at least one property of the controlled environment so as to cause the vapor of the atmosphere to condense. The combination of Angadjivand et al. and Pike et al. teaches this limitation. Specifically, combination of Angadjivand et al. and Pike et al. suggests wetting a meltblown, microfiber web by contacting the web with steam (i.e., water vapor) (see paragraph 13 of paper #6). In other words, the amount of water vapor (i.e., a property) in the "controlled environment" (i.e., the environment in which the web is treated) is increased (i.e., altered), thereby causing the vapor to condense on the web.

### ***Response to Arguments***

19. Applicant's arguments filed on 8/5/2002 have been fully considered but they are not persuasive.
20. Preliminarily, the applicant's arguments with respect to the IBM Technical Disclosure Bulletin are moot, as the rejections based on the IBM Technical Disclosure Bulletin have been withdrawn as set forth above in paragraph 7.
21. With regards to Sidles et al., the applicant argues that rubber compositions, particularly those used in the manufacture of tires, may not be inherently dielectric. In response, the examiner notes the applicant's specification (page 5, lines 28 – 30) that teaches that rubber is a material considered by the applicant to be dielectric. In

addition, please note that the rejection of the claims is no longer based on Sidles et al. alone, but on the combination of Sidles et al. and Agostini et al. (see paragraph 12 above). Therefore, even if the rubber composition used in Sidles et al. is not inherently "dielectric", the rubber compositions suggested by Agostini et al. have volume resistivities in the range claimed by the applicant and therefore are inherently dielectric as required by the claims of the instant application.

22. With regards to Popov et al., the applicant argues that Popov et al. do not teach that the vapor is condensed. The applicant then states that for condensation to occur, energy must be added to or removed from the system, and Popov et al. do not teach the requisite change in energy. In response, Popov et al. explicitly teach that the vapor is condensed on the layer of filaments (see Example 1). The applicant's statement that Popov et al. do not teach the requisite change in energy for condensation to occur is simply supposition on the part of the applicant. In addition, please note the applicant's definition of "condensing" on page 2 of the specification: condensing is "altering to another and denser form, e.g., reducing gas or vapor to a liquid". This is exactly what occurs in the process of Popov et al. – vapors are altered to liquid form.

23. With regards to Angadjivand et al. and Pike et al., the applicant argues that the skilled artisan would have no reason to combine Angadjivand et al. and Pike et al. in the manner proposed in the Office Action. In response, Angadjivand et al. teach the production of an electret by wetting a non-woven fiber web with a stream of water droplets and then drying the web (Abstract). Pike et al. teach that wetting a non-

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woven fiber web can be performed by contacting the fibers with either a hot water spray, which is the process taught in Angadjivand et al., or with steam (i.e., water vapor) (Col.8, lines 40 – 46). As such, one of ordinary skill in the art would have been motivated to wet the non-woven fiber web of Angadjivand et al. with steam as taught by Pike et al. with the reasonable expectation of obtaining similar results, i.e., of successfully wetting the non-woven fiber web as taught by Pike et al. and desired by Angadjivand et al. Please note that no unexpected results have been shown for wetting the web by condensation of a vapor as opposed to spraying the web with a fine mist of water droplets as taught by Angadjivand et al.

***Allowable Subject Matter***

24. Claims 26 – 30 are allowed for the reasons set forth in paragraphs 23 – 24 of the non-final Office action, paper #4, mailed on April 11, 2001.
25. Please note that Claim 25 has been rejected under 35 U.S.C. 112, second paragraph, for the reasons set forth in paragraphs 4 – 5 above, but no art has been applied against the claim.
26. Please note that Claim 31 has been objected to for the reasons set forth in paragraph 2 above, but no art has been applied against the claim.
27. Claims 5, 6, 8, and 18 – 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The examiner's

reasons for indicating allowable subject matter are set forth in paragraphs 23 – 24 of the non-final Office action, paper #4, mailed on April 11, 2001.

### ***Conclusion***

28. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
29. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.
30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wesley D Markham whose telephone number is (703) 308-7557. The examiner can normally be reached on Monday - Friday, 8:00 AM to 4:30 PM.
31. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (703) 308-2333. The fax phone

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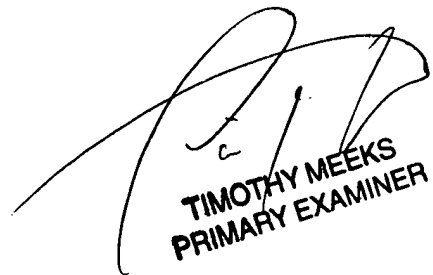
numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

32. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



WDM  
October 11, 2002

Wesley D Markham  
Examiner  
Art Unit 1762



TIMOTHY MEEKS  
PRIMARY EXAMINER